



UNITED STATES PATENT AND TRADEMARK OFFICE

qm
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,892	12/12/2001	Frankie F. Roohparvar	400.094US01	9026

7590 05/01/2003
FOGG SLIFER & POLGLAZE, P.A.
P.O. Box 581009
Minneapolis, MN 55458-1009

EXAMINER

YOHA, CONNIE C

ART UNIT	PAPER NUMBER
----------	--------------

2818

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,892

Applicant(s)

ROOHPARVAR, FRANKIE F.

Examiner

Connie c. Yoha

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 5-13 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office acknowledges receipt of the following items from the Applicant:
Information Disclosure Statement (IDS) filed on 1/29/02 was considered.
2. Claims 1-20 are presented for examination.
3. Claims 5-13, 20 are withdrawn from consideration due to the election of restriction requirement (paper #4).
4. Claims 1-4 and 14-19 are pending.

Claim Rejections - 35 USC § 112

5. Claim 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is vague and not clear, therefore can not be understood by the examiner what is meant on line 7 and 9 of claim 1 "a first location of the bit lines" and "a second location of the bit lines". Also with regard to claim 4, it is vague and not clear how the read sense amplifier comprising of transistors with a gate oxide of approximately 200A and at the same time be at approximately 70A.

Claim 2-3 are rejected due to the rejections of the parent claim 1

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, 3 and 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Motoshima et al Pat. No. 5847994.

With regard to claim 1, as far as understood, Motoshima discloses a flash memory device comprising: a memory array (fig. 2, BLK0-BLK_n) having erasable blocks of memory cells, each block of memory cells being arranged in a row and column configuration, wherein each column of memory cells is couplable to an associated bit line (fig. 2, WBL0, RBL0...WBL1-RBL1); control circuitry (fig. 1, 9) to control memory operations to the memory array; a verify sense amplifier (fig. 2, 12) to verify a program state of the memory cells, the verify sense amplifier is coupled to a first location of the bit lines (fig. 2, a node between WBL0 and verifying sense amplifier 12); a read sense amplifier (fig. 2, 10) to read a program state of the memory cells, the read sense amplifier is coupled to a second location of the bit lines (fig. 2, a node between RBL0 and read sense amplifier 10); and a switch (fig. 2, WYG0, RYG0, WYG1, RYG1) to selectively couple either the verify sense amplifier or the read sense amplifier to an output circuit.

With regard to claim 3, Motoshima discloses the verify sense amplifier and the read sense amplifier have an inherent adjustable sensitivity.

Drafted as Method claim

7. As per claim 14-19 encompass the same scope of invention as to that of claim 1, and 3 except they draft in method format instead of apparatus format. The claim is therefore rejected for the same reason as set forth above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoshima et al Pat. No. 5847994.

With regard to claim 2, Motoshima, as applied in prior rejection, disclosed all claimed subject matter except the flash memory is a synchronous flash memory. However, it would have been obvious and is well known for one having an ordinary skill in the art at the time the invention was made to recognized that Motoshima's flash memory can further disclosed the flash memory to be synchronous flash memory to synchronize the control signal with the external supply clock.

With regard to claim 4, Motoshima, as applied in prior rejection, disclosed all claimed subject matter except wherein the read sense amplifier comprises transistors with a gate oxide of approximately 200A and the read sense amplifier comprises transistors with a gate oxide of approximately 70A. However, it would have been an obvious matter of design choice for one having an ordinary skill in the art at the time the invention was made to choose the desire transistor gate oxide thickness to be able to obtain the desire speed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Roohparvar (6552934), Kata et al (6515900) and Chen et al (6185128) disclose a Flash memory device.
10. When responding to the office action, Applicants' are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.
11. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (703) 306-5731. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The

Art Unit: 2818

examiner's supervisor, David Nelms, can be reached on (703) 308-4910. The fax phone number for this Group is (703) 308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0956. . . .


C. Yoha

April 2003


Connie C. Yoha

Patent Examiner

Art Unit 2818